



SC DEPARTMENT *of* **ENVIRONMENTAL SERVICES**

Bureau of Air Quality Response to Comments on Air Quality

Santee Cooper Cross Generating Station Pineville, Berkeley County, South Carolina Permit Number CP-5000034 v1.0

The following is the South Carolina Department of Environmental Services, Bureau of Air Quality's (SCDES or Department) response to the comments made during the formal comment period held April 26, 2024, through May 28, 2024, regarding the draft synthetic minor construction permit for Santee Cooper Cross Generating Station (Cross).

The written Department Decision, construction permit, statement of basis, this response document, and a letter of notification are located for viewing at the SCDES Columbia office located at 2600 Bull Street, Columbia SC 29201, and on our webpage at <https://des.sc.gov/programs/bureau-air-quality/air-quality-department-decisions>.

Hard copies of all the above-listed documents and written comments received can be requested by contacting our Freedom of Information Office at (803) 898-3882.

The following is a summary of the changes to the draft permit based following the comment period:

- The paragraph (1) definition for "startup" from 40 CFR 63.10042 was added to Condition B.2 of the construction permit.
- The malfunction exclusion was removed from Condition B.1 of the construction permit.
- Condition B.2 was modified to include the monitoring provisions from 40 CFR 63.10010(f) and monitoring conditions B.5 and B.6 were removed.
- The reporting frequency in Condition B.1 and the table in Section D of the permit was changed from semiannual to quarterly.

Periods of Startup, Shutdown, and Malfunction

Comment: There was a comment asserting that the proposed permit includes an exemption during periods of startup, shutdown, and malfunction and that such exemption is unlawful based on Clean Air Act requirements for Title V permits to apply emission limits and standards on a continuous basis.

Response: As discussed below, the permit does not include any unlawful exemption during periods of startup and shutdown.

The permit's startup and shutdown provisions, found in Condition B.2 of the permit, are requirements previously adopted and currently in effect pursuant to EPA's Mercury and Air Toxics (MATS) regulation, found at 40 CFR Part 63, Subpart UUUUU (Subpart UUUUU). The provisions were originally promulgated by EPA pursuant to its authority under Section 112 of the Clean Air Act (CAA), which also incorporates the CAA's general definitional requirement that emission limitations or emission standards limit emissions of air pollutants on a "continuous basis." CAA Section 302(k), 42 U.S.C. § 7602(k). Specifically, the CAA defines "emission limitation" and "emission standard" to mean "a requirement ... which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under [the Clean Air Act]."

To the extent that the CAA were to require that the limits and restrictions adopted in this permit for purposes of regional haze compliance qualify as "emission limitations or emission standards," this permit requires the facility to limit emissions during periods of startup and shutdown, consistent with the continuous emissions limitations in the MATS rule. As required in permit condition B.2, the facility will limit emissions during startup and shutdown events by complying with the applicable MATS work practice standards, which include using clean fuels as defined in §63.10042 for ignition and operating the dry scrubber and SCR systems appropriately to comply with relevant standards applicable during normal operation.

During normal operation, the facility is required to comply with the 0.2 lbs/million Btu SO₂ limit from the MATS rule to meet the requirements of the Regional Haze Rule (RHR). During periods of startup and shutdown, the facility will remain required to comply with the applicable MATS work practice requirements as stated above.

Note that although the facility is using the emission limits, including but not limited to the work practice standards, from the MATS regulations presently in effect for compliance with the Regional Haze Rule, the conditions in this permit are not intended for compliance with

Subpart UUUUU. Apart from the facility's compliance obligations under this regional haze permit, the facility will remain required to comply with Subpart UUUUU, and any subsequent revisions, as provided in the latest operating permit and Notice of Compliance Status. Specifically applying the referenced version of MATS requirements for purposes of regional haze compliance will guard against any impact from potential relaxations or vacatur in the future.

The malfunction exclusion has been removed from Condition B.1 of the construction permit. The facility will be required to include emissions during process malfunctions in the 30 day emission averages used to demonstrate compliance with the SO₂ limit. The removal of this exclusion has also been noted in the statement of basis.

Comment: The commenters expressed concern that it is unclear whether the draft permit intends to incorporate amendments to the MATS rule's definition of "startup" and assert that the 2012 rule's definition is outdated and cannot lawfully be used.

Response: The 2024 modification to the startup definition in 40 CFR 63.10042 does not impact compliance with the MATS regulations (or Regional Haze Rule compliance) for Cross, as Cross did not rely on the removed option for demonstrating compliance with emissions reductions during startup events. The permit has been modified to specify that the facility shall use paragraph (1) for defining startup. Paragraph (1) is not modified in the current update to the MATS rule.

Comments on Regional Haze State Implementation Plan

The remainder of the comments were on the content and conclusions of the Regional Haze State Implementation Plan (SIP) Revision submitted to EPA on March 4, 2022. The comments asserted that due to claimed flaws in the four-factor analysis underlying the Regional Haze SIP Revision, the draft permit's emission limits were not sufficient to satisfy regional haze requirements, and that additional controls should have been considered and required for the facility.

Response: The Department's Regional Haze SIP Revision submitted to EPA on March 4, 2022, identified existing control measures based on the MATS rule as the relevant control measures that would apply to Cross for regional haze purposes. The addition of other measures apart from existing MATS controls as previously identified in the Department's Regional Haze SIP Revision is outside the scope of this permit action. As explained in the Statement of Basis (SOB), the limited purpose of this construction permit is to document, in a single permit, the limits the Department's Regional Haze SIP Revision concluded were necessary to make reasonable progress.

Under the federal Clean Air Act, the EPA is responsible for reviewing the Department's SIP submission for Clean Air Act compliance and acting on the plan revision accordingly. 42 U.S.C. Section 7410(k)(3). By federal Consent Decree in Case No. 1:23-cv-01744-JDB before the U.S. District Court for the District of Columbia, the EPA is required to take final action on the Department's Regional Haze SIP Revision on or before July 31, 2025.

The Department further notes that the commenters' concerns regarding the Department's Regional Haze SIP Revision were raised during the public notice period for the Draft Regional Haze SIP Revision and were addressed in the Department's associated response to comments. For the same reasons discussed in the Department's response to comments for the Regional Haze SIP Revision, the limits identified in the plan revision (and, in turn, the construction permit) are considered to be appropriate.

For convenience, relevant responses to comments that were included with the Regional Haze SIP Revision submitted to EPA are repeated herein. Please see the Department's full response to comments for the Regional Haze SIP Revision for additional comments and responses.

Extracts from Regional Haze SIP Revision Response to Comments:

Comment:The Department received comments regarding certain units being considered "effectively controlled."

Response: Regarding Santee Cooper Cross, ... for effectively-controlled units meeting the MATS SO₂ emission limit of 0.2 lb/million Btu, EPA's August 2019 regional haze guidance notes on page 23 that this limit is "low enough that it is unlikely that an analysis of control measures...would conclude that even more stringent control of SO₂ is necessary to make reasonable progress." EPA's July 2021 regional haze guidance continues to allow use of the effectively controlled unit criteria within Regional Haze SIPs. The EPA did, however, add a requirement that states should consider how the source's actual operations compare to the permitted limits, to determine whether a lower limit could be achieved by the unit. This information has been added to the SIP as Table 7-26. The Department acknowledges the comments regarding potential improvements to the pollution control units. The Department will consider the improvements in the progress report and/or third round of regional haze.

Comment: South Carolina received comments regarding four-factor analyses for NO_x controls should be required for all EGUs in South Carolina, including a source-specific comment for Cross.

Response: Regarding the comments for a four-factor analysis for NO_x controls at Cross and all the South Carolina EGUs, it was explained in a previous comment response, and in Section 7.4 6 of the Regional Haze Plan, sulfates continue to be the largest contributor to anthropogenic visibility impairment at Cape Romain and at affected Class I areas nearby South Carolina, and point sources continue to be the most significant source of SO₂ in South Carolina. If nitrates become an important contributor to visibility impairment in future years, then NO_x emissions will be evaluated in future implementation periods.

Comment: The Department received comments regarding cost threshold. The commenters state that the Department must establish and provide a basis for a cost effectiveness threshold. EPA's regional haze guidance and regulations require that the SIP "explain why the selected [cost] threshold is appropriate for that purpose and consistent with the requirements to make reasonable progress."

Response: South Carolina has reviewed and considered all data submitted relative to costs of compliance consistent with the RHR. In 40 CFR 51.308(f)(2)(i), the RHR states that, "The State must evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected anthropogenic source of visibility impairment." The RHR does not mandate the level of details that must be provided for the cost calculations. The EPA's 2019 Regional Haze Guidance recommends that EPA's Air Pollution Control Cost Manual be used for determining costs. The EPA's Guidance does allow for alternative approaches to cost calculations. Regarding documentation, the Department reviewed all cost-effectiveness calculations to determine whether additional information was needed. The Department disagrees that vendor quotes or site-specific information is necessary to estimate costs of compliance. While site-specific cost information is preferred, EPA's August 2019 guidance and the Control Cost Manual note that where site-specific information is not available, states may use generic cost estimates or estimation algorithms in determining costs of compliance. Regarding cost items used, the Department agrees that in certain cases, as described in Section 7.8 of the Regional Haze Plan, certain cost items included in the initial analyses were not justified. Where the estimated cost-effectiveness values were reasonably close to being cost-effective, the Department did not revise calculations for control costs where the revised costs would still be significantly above a reasonable cost-effectiveness threshold.

There are no requirements in either the RHR or EPA guidance for states to establish a cost effectiveness threshold. EPA's August 20, 2019, guidance states that "the Regional Haze Rule does not prevent states from implementing "bright line" rules, such as thresholds, when considering costs" (p. 38) however the state must explain the basis for any threshold. Also,

cost of compliance is just one of the four statutory factors to be evaluated when establishing reasonable progress goals. Establishment of a cost effectiveness threshold for determining when a control measure should be required for reasonable progress would ignore the other three statutory factors and thus violate section 169A(g)(1) of Clean Air Act. The Department also noted that substantial reductions in SO₂ and NO_x emissions occurred in South Carolina and other VISTAS states between 2008 and 2020. Those reductions were not part of the four factors that were considered for each control option, but the Department continues to believe that the decrease in emissions provides additional weight of evidence for the use of a lower cost.